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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,635	10/27/2005	Takuo Mizutani	0020-5434PUS1	9199

2292 7590 08/13/2008
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EXAMINER

NGUYEN, VU ANH

ART UNIT	PAPER NUMBER
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4171

NOTIFICATION DATE	DELIVERY MODE
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08/13/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/554,635	Applicant(s) MIZUTANI ET AL.	
	Examiner Vu Nguyen	Art Unit 4171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/27/2005, 01/27/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to because of the following informalities: The acid value unit should be per gram, not per milligram. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima et al. (WO 02/031010).

Notes: Document EP 1,270,624 A1 is being relied upon as an English translation of WO 02/031010.

4. Regarding claim 1, the applicants claim an aqueous dispersion comprising a water-insoluble solid which consists of fine particles having the surfaces coated with a resin having therein a polyether structure. The coated amount of the resin is 15-1,000 parts by weight per 100 parts of the solid.

Claims 2-7 further narrow the scope of claim 1 and claim 9 recites a method of preparing said dispersion.

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5. Corresponding to the limitations set forth in these claims, Nakajima teaches a pigment dispersion comprising water-insoluble pigments whose surfaces are coated with a polyoxyalkylene-containing resin [0017-0018]. The amount of the pigments is 15-1,500 parts by weight per 100 parts of the resin [0053]. Examples are given where the amount of the resin is 100 parts per 100 parts of pigments (Table 3, Examples 10 & 11).
6. Corresponding to claim 2, which specifies the solid recited in claim 1 to be a pigment, the dispersoid in the prior art is a pigment as mentioned above.
7. Corresponding to claim 3, which specifies the resin recited in claim 1 to have an acid value of 5-70 KOH-mg/g, the disclosed resin has an acid value of 5-150 [0055].
8. Regarding claims 4 and 5, claim 4 specifies the resin to comprises polyoxyethylene or polyoxypropylene, and claim 5 specifies the resin to comprise a polyether-grafted acrylic resin, the disclosed resin comprise polyoxyethylene or polyoxypropylene (meth)acrylate monomers [0031].
9. Corresponding to claim 6, which specifies the resin to have M_n of 1,000-100,000, the disclosed resin has M_w of 500-100,000 [0046]. An example is given where a resin containing polyethylene glycol monomethacrylate has M_w of 20,000 (Table 1, Example 1). This value of M_w is expected to correspond to a M_n value within the recited range.
10. Corresponding to claim 7, which specifies the fine particles recited in claim 1 to have an average particle size of 0.01-0.3 μm , the disclosed coated pigments have particle size of 0.01-1 μm in one embodiment [0073] and 1-300 nm in another embodiment [0089].

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11. Regarding claim 9, which recites a method of preparing an aqueous dispersion as claimed in any one of claims 1-8, comprising mixing an organic phase containing a water-insoluble solid and a polyether structure-containing resin with an aqueous phase, The prior art teaches the same method [0097].

Claim Rejections - 35 USC § 102/103

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 8 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nakajima et al. (WO 02/031010) with additional evidence provided by www.mrinkjet.com/inkreport.htm.

Notes: Document EP 1,270,624 A1 is being relied upon as an English translation of WO 02/031010.

15. Regarding claim 8, which specifies the dispersion of claim 1 to have a surface tension of $3.0 \times 10^{-4} - 6.0 \times 10^{-4}$ N/cm at a solid concentration of 3-10% by weight, the prior art is silent on a surface tension value of the disclosed dispersion at the recited

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solid concentration. However, considering that the disclosed dispersion is highly similar to the claimed dispersion in terms of dispersion composition, resin composition and property, and method of dispersion preparation, it is reasonable to expect the disclosed dispersion to possess the property recited in claim 8. Further, the surface tension of an inkjet ink should be about 30-40 dynes/cm (which is equivalent to $3.0 \times 10^{-4} - 4.0 \times 10^{-4}$ N/cm); too high a surface tension causes the ink to be deficient in its wetting property while low surface tension results in feathering problem (See attached document from www.mrinkjet.com/inkreport.htm). Since the disclosed dispersion is designed for inkjet ink [0001], it is reasonable to expect said dispersion to have a surface tension in the range of 30-40 dynes/cm.

Since the PTO does not have proper means to conduct experiments to confirm such assertion, the burden of proof is now shifted to the applicants to show otherwise. **In re Best**, 562, F.2d 1252” 195 USPQ 430 (CCPA 1977); **In re Fitzgerald**, 205 USPQ 594 (CCPA 1980).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Nguyen whose telephone number is (571)270-5454. The examiner can normally be reached on M-F 7:30-5:00 (Alternating Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on 571-272-1515. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 4171

Vu Nguyen
Examiner
Art Unit 4171